



CORK INSULATION CO., INC.

CORK

CORINCO
insulation products

Cork Insulation Company, Inc.

The Cork Insulation Company, Inc., maintains at Wilmington, Delaware, a most modern and efficient factory for the manufacture of Corinco Corkboard, Cork Covering, Cork Tile and all of our other products. At Wilmington we have complete facilities for unloading raw material purchased from the Mediterranean area by our own representatives, who have been long trained and who are thoroughly familiar with all sources of raw cork supply.

Over the years we have developed and added new and better equipment to insure the maintenance of an efficient plant, second to none, for the manufacture of cork products.

Engineering and erection service

Cork Insulation Company, Inc., has branches in principal cities throughout the country, staffed by trained and competent insulation engineers. The company also has a wide distribution and service coverage through insulation contractors who act as distributors in most of the important cities throughout the country. This combined organization is in a position to give complete engineering service, and stocks are carried by all of our branches and many of our distributors to insure prompt and efficient service regardless of geographical location.

Our own factory branches and our insulation contractor distributors are in position to offer complete technical service for the handling of insulation problems. They are capable of furnishing help and advice to insure the proper type, thickness and method of installation together with recommendations for the proper sundries which should be used for the application of Corinco products. Our organization can, of course, make surveys, furnish specifications, give estimates and quote prices on bills of material or complete erected jobs.

CORK

Unique cellular construction

The thick outer bark of the cork oak tree is not fibrous but is made up of millions of tiny cells. These tiny cells, which imprison small quantities of air, average approximately 1/1000 of an inch in diameter and are separated from each other by a microscopic strand of resinous gum.

It has been proven that, next to a complete vacuum, a minutely divided air space is one of the most effective barriers against the passage of heat and cold.

Cork, then, by its peculiar cellular structure, is a natural insulator.

Manufacturing processes

In the manufacture of cork insulation products the raw cork bark is ground into granules varying in size from $\frac{3}{8}$ to $\frac{3}{4}$ of an inch. These granules, without any added binder, are poured into ovens which serve as molds.

The granules are then baked with high pressure steam under complete automatic control both as to temperature and pressure, which insures material of uniformly high quality.

When the blocks are removed from the molds they are slowly cooled and then passed through sizing machines.

Uses

Corinco Insulation Products are extensively used where control of temperatures is desirable or essential, whether it be a small room or a complete building.

The piping, ducts and other equipment in connection with all types of temperature control and processing must necessarily be insulated, and again Corinco Cork Products have been proven the ideal material.

Special advantages of cork insulation board

1. Low thermal conductivity

Because of its low thermal conductivity, cork is generally recognized as the standard material in the low temperature insulating field. It is common parlance in the refrigerating and low temperature trades to speak of insulation materials in terms of "cork equivalent".

Although laboratory tests have indicated that a few materials show a lower conductivity than cork, *under actual operating conditions* cork has a K factor of .25 to .27. This fact, together with its other special characteristics, makes cork the best answer to low temperature insulation problems.

2. High resistance to moisture and capillarity

Low temperature insulation, to be satisfactory, must retain its operating efficiency over long periods and must be able to resist the deteriorating effects of moisture. Cork, being cellular rather than fibrous in nature, has a natural buoyancy and resistance to water.

This inherent resistance to water is further fortified by processing. This processing has two very important effects. First, it drives out any remaining sap or moisture in the air cells, thus increasing the amount of dry imprisoned air in the cork. Second, it heats up and melts the natural resinous gums surrounding the cells. This melted gum flows through the entire mass of granules and binds them together into a single air-tight and water-proof board.

3. Fire retardant

Many will undoubtedly remember charring a cork stopper to be used as "make-up" in childhood activities. The cork always ceased to burn as soon as it was removed from the flame.

Various laboratories have conducted fire tests on cork and other materials in accordance with the meth-

ods prescribed by the United States Bureau of Standards. In no instance did the flame break through the cork being tested. All other materials tested, however, were either completely consumed or the binder burned out, leaving an ash residue or a mass of inorganic material.

As soon as the flame was removed the cork ceased to burn and all smoldering stopped within one minute. The other materials continued to flame or smolder until completely consumed. The substitute materials were classed as "combustible" while cork was described as "fire retardant".

4. Structural strength and erecting advantages

Another outstanding advantage of cork over other insulating materials is its structural strength. Cork will stand tremendous loads up to many thousands of lbs. per sq. ft., and will retain its high insulating efficiencies under such loaded conditions.

From an erecting and applying standpoint, cork has numerous excellent qualities. It can be readily cut or sawed with ordinary tools, is furnished in sizes which are easily handled, is extremely resilient, quite flexible and, last but not least, it presents no hazards and contains no abrasive materials which might be harmful to workmen.

5. Sanitary, rot and vermin proof

Sanitation measures demand that an insulating material shall not harbor vermin or germs, that it shall be free from offensive odors, and that it shall not disintegrate. Cork has no natural odor, and, since no glue, pitch, or other artificial binder is used in its manufacture, cork can be applied with the knowledge that it will neither disintegrate nor be attacked by insects or vermin.

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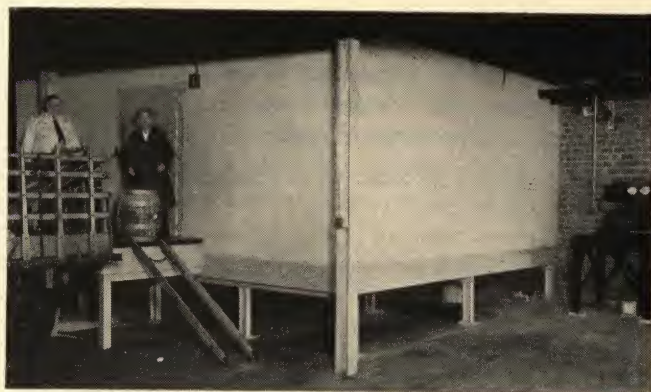
Application of two-layer insulation on large roof deck.



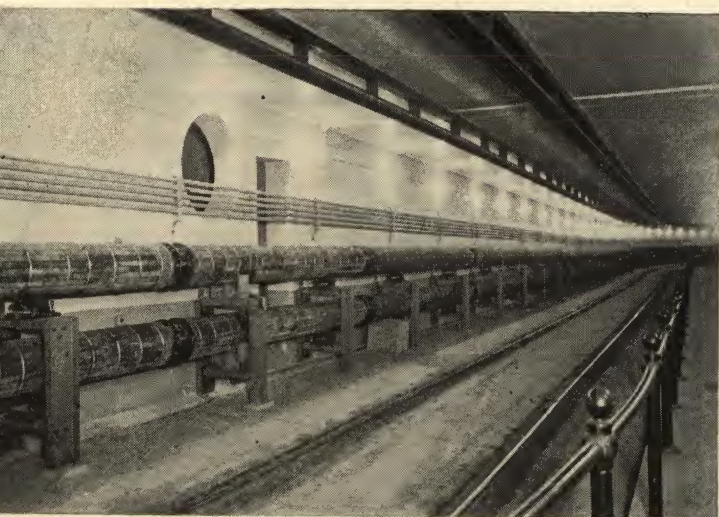
Elevated cold storage room in process of construction, showing temporary wood studs on solid cork wall.



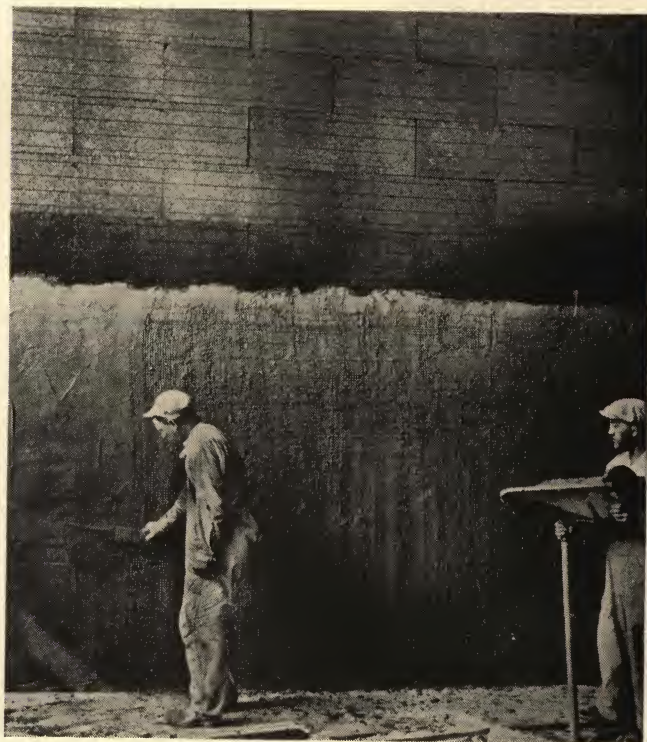
Exterior of low temperature room showing anteroom and overlapping type freezer door.



Cold storage room (above), showing completed solid cork walls with plaster finish.



Long run of large size cork pipe covering in tunnelway.



Insulated wall showing application of scratch coat plaster over corkboard.

Typical Corinco installations

CORINCO corkboard for cold storage insulation

Recommended storage temperatures (in degrees F)

Apples.....	31-33
Asparagus.....	32-35
Beans (dried).....	32-45
Beef (fresh).....	33-37
Beef (dried).....	36-40
Beer (barrels).....	32-38
Beer (bottles).....	45
Berries (fresh, 10 days).....	35-40
Butter.....	10-32
Butter (to freeze).....	20-22
Cabbage.....	31-35
Cantaloupes.....	40
Carrots.....	32-35
Celery.....	31-35
Cheese.....	28-35
Chocolate (dipping room).....	65
Chocolate (to cool).....	40
Cider.....	30-35
Cigars.....	35-42
Cranberries.....	32-40
Cream.....	33-35
Cucumbers.....	36-38
Dates.....	45-55
Eggs.....	30-35
Fish (fresh).....	20-30
Fish (fresh-water frozen).....	17-20
Fish (canned).....	33-36
Fish (dried).....	25-40
Flowers (cut).....	36
Fruits (canned).....	30-40
Fruits (dried).....	35-40
Furs (undressed).....	35
Furs (dressed).....	25-35
Grapes.....	30-36
Hams (not brined).....	20-35
Hogs.....	30-33
Honey.....	36-45
Hops.....	32-35
Ice.....	28
Ice Cream.....	15
Lard.....	33-40
Lemons.....	35-55
Maple Syrup and Sugar.....	40-45
Meats (canned).....	30-40
Meats (brined).....	35-43
Meats (fresh).....	33-35
Melons.....	35-36
Milk.....	32-38
Nuts (in shells).....	30-40
Nursery Stock.....	30
Oatmeal.....	38-42
Oleomargarine.....	20-35
Onions.....	32-36
Oranges.....	32-45
Oysters (tubs).....	25-35
Oysters (shells).....	33-43
Peaches.....	31-45
Pears.....	30-36
Pork.....	20-34
Potatoes.....	34-50
Poultry (frozen).....	10-30
Poultry (to freeze).....	0-22
Poultry (long carry).....	10-30
Raisins.....	55
Salt Meat Curing Room.....	32
Sardines (canned).....	35-40
Sauerkraut.....	35-38
Sausage Casings.....	20-30
Scallops (frozen).....	16
Syrup.....	35-45
Tobacco.....	35-42
Watermelons.....	34-40
Wines.....	40-50
Woolens.....	25-28

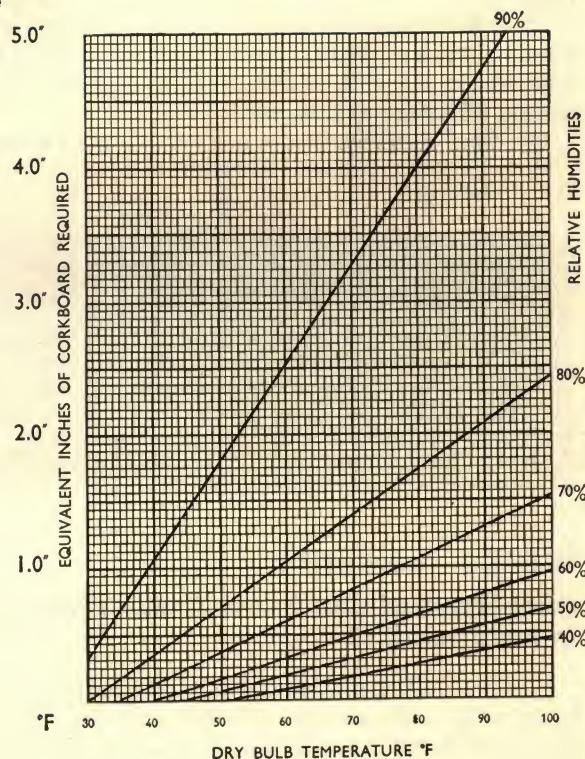
Thicknesses of insulation required for various temperatures

The table at right is a general guide for the thickness of insulation to be used at various temperatures. We suggest that your specific problem be presented to us in order that our engineers can make recommendations as to the proper thickness of insulation, method of application, etc.

Room temperature	Corkboard thickness
45° and above	2"
35° to 45°	3"
20° to 35°	4"
5° to 20°	5"
-5° to +5°	6"
-20° to -5°	8"
-50° to -20°	10"
-100° to -50°	12"

Chart to determine corkboard thickness to prevent condensation

Many industries have condensation problems. The chart below may be used as a guide to determine the proper thickness of corkboard which should be applied, based on outside temperatures in this country.



Deflection of Corinco corkboard under load

Tests based on 2 inch thick material one square foot in area.

Tests made by Smith-Emery Company, 920 Santee Street, Los Angeles, California (associated with Pittsburgh Testing Laboratory).

Total load	Deflection
900 lbs.	0.0625"
2300 lbs.	0.1250"
3200 lbs.	0.1875"
3600 lbs.	0.2500"
5000 lbs.	0.3250"

General recommendations for installing Corinco corkboard

Walls. Air tends to move through the walls of a cold storage space toward the low temperature side. When this occurs, the moisture in the air will be deposited if the dew point is reached. Should this condensation of moisture take place in the body of the insulation, its efficiency would be seriously impaired.

Theoretically the outer wall surface of the building is the ideal place to waterproof and vaporproof against infiltration. Unfortunately this is impossible in most cases and the only alternative is to treat the inside of the wall before erecting the insulation.

Although both cement mortar and hot asphalt are specified for erecting wall cork, asphalt is recommended as it provides protection against air infiltration.

On very high walls, it is advisable to provide additional supports for the cork by installing intermediate horizontal or vertical wood stays bolted to the walls.

Ceilings. The preferred method of insulating ceilings is to place the insulation on top of the floor above, connecting it with the wall insulation through slots around the floor. Where slots cannot be provided ribbands of cork should be installed on the ceiling below, adjacent to the wall, to eliminate heat loss through the ceiling structure at this point.

On new concrete structures where insulation must

be placed on the underside of the ceiling slab, the cork should be placed in the forms before concreting rather than to apply to the insulation to the underside of the finished slab.

If this method is not feasible it is necessary to use one of the less desirable forms of installation, such as erection with cement mortar or hot asphalt. Where the cork is erected with cement mortar it is important to securely prop the cork—this method is not recommended for ceilings of any considerable size. Where hot asphalt is used, wood nailing strips should first be bolted to the concrete, and the cork securely nailed thereto.

Floors. Floor insulation is very important, as the laws of Nature direct cold air downward. Unless the floor is sufficiently insulated in comparison to the room temperature carried, the refrigeration loss over a period of time will be substantial and costly.

Roofs. Roof insulation is generally placed immediately on top of the structural roof and the membrane applied directly to the cork surface. This is the ideal method of preventing infiltration of air. Since the roof exposure is usually greater than that of any other exterior surface of the building, it is advisable to provide more insulation at that point.

SPECIFICATIONS

Notes: The following specifications are given to cover typical conditions which are commonly encountered. For special conditions, details of the most satisfactory

type of installation and specifications will be gladly supplied by insulation engineers who are available at our main office, branch offices, and offices of our distributors.

The following specifications are based on two-layer construction. For single layer construction, apply as described for the first layer only.

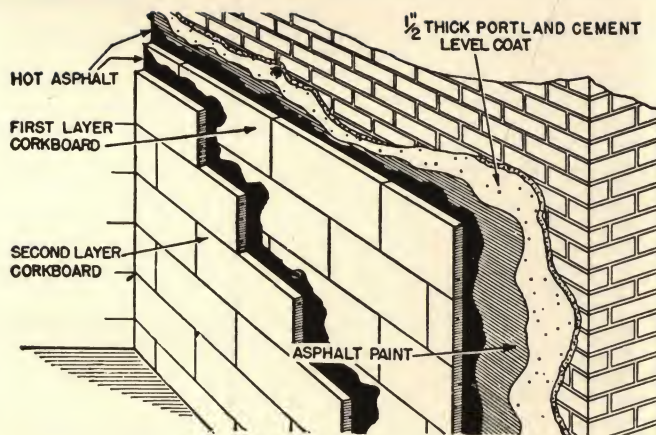
WALLS—masonry

(Two layers of Corkboard, both layers applied in hot asphalt.)

The surfaces of all masonry walls against which Corkboard is to be applied must be thoroughly cleaned of all dirt, dust, loose mortar, etc. Where necessary to permit 100% contact of Corkboard they shall be made true and level with Portland cement plaster, mixed in proportions of approximately one part Portland cement and three parts of clean, sharp sand. A small amount of hydrated lime may be added, not exceeding 5%. Wall surfaces against which this leveling coat is to be applied should first be roughened to insure a proper bond. The plaster shall be applied in one or more coats, and be of a thickness to cover all high points. It shall be straightened with a straightedge and floated to a smooth finish.

After the plaster has thoroughly dried, one good coat of Corinco Asphalt Priming Paint shall be applied. When the paint has dried sufficiently, the first layer of Corinco Corkboard shall then be applied in hot asphalt.

A second layer of Corinco Corkboard shall be applied in hot asphalt, and additionally secured to the first with wooden skewers.



All joints must be butted tight, proper care being exercised to keep all edges and ends clean. Vertical joints in the first layer must be broken, and all joints in the second layer broken with respect to those in the first.

The exposed surfaces of Corkboard shall be finished as described under "Finishes".

WALLS—wood sheathed

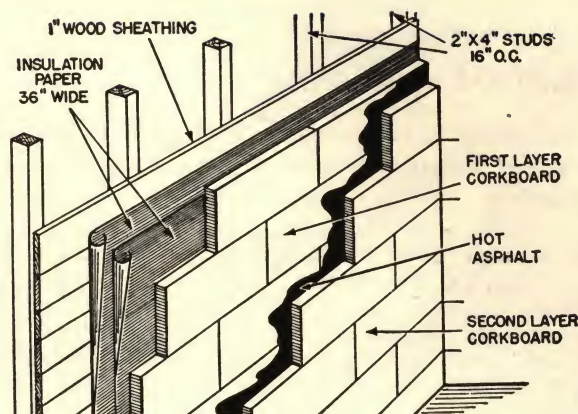
(Two layers of Corkboard, first layer nailed—second layer applied in hot asphalt.)

Directly against the wood sheathing two layers of waterproof insulating paper shall be applied, with edges well lapped.

The first layer of Corinco Corkboard shall be applied against the paper, and secured to the wood sheathing with special flat head galvanized wire nails of proper length.

The second layer of Corinco Corkboard shall be applied in hot asphalt, and additionally secured to the first layer with wooden skewers.

All joints must be butted tight, proper care being exercised to keep all edges and ends clean. Vertical joints in the first layer must be broken, and all joints in the second layer broken with respect to those in the first layer.



The exposed surfaces of Corkboard shall be finished as described under "Finishes."

PARTITIONS—cork—self-sustaining

(Two layers of Corkboard, asphalt or cement mortar between.)

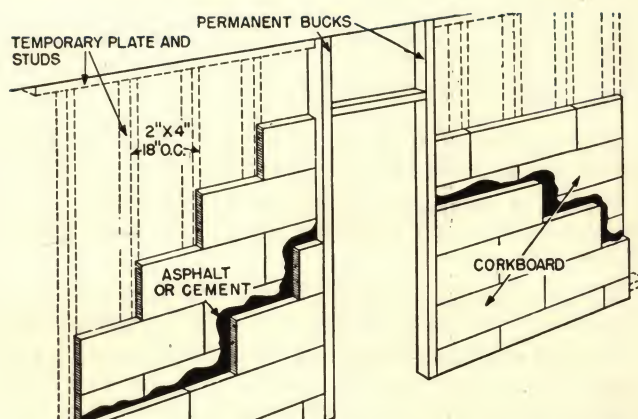
Temporary 2 x 4 studs shall be erected 18" on center on a line with one side of the partition. Care must be exercised to have the studding plumb and in perfect alignment. (Where doors are to be set in partitions, permanent wooden bucks shall be set with wooden lintel between. Door bucks shall be securely anchored to floor and ceiling to withstand any shock due to opening and closing of doors.)

The first layer of Corinco Corkboard shall be erected on edge against temporary studs. Each corkboard shall be securely toenailed to the abutting one, and likewise to walls, floor and ceiling, wherever possible, with wooden skewers.

All joints must be butted tight, and vertical ones broken.

A. Second layer in asphalt: A second layer of Corinco Corkboard shall be applied in hot asphalt, and additionally secured to the first with wooden skewers.

B. Second layer in Portland cement mortar: The surface of the first layer shall be rough scratched with Portland cement mortar approximately 1/4" thick, mixed one part Portland cement, and two parts clean, sharp sand. After this coat has set, a second layer of Corinco Corkboard shall be applied in Portland cement mortar approximately 1/4" thick mixed in same proportions as for scratch



coat, and additionally secured to the first with wooden skewers.

All joints in the second layer must be butted tight, proper care being exercised to keep all edges and ends clean and broken with respect to those in the first layer.

Each exposed side of Corkboard partition shall be finished as specified under "Finishes."

Before removing temporary studs, finish the opposite side of partition.

CEILINGS—concrete

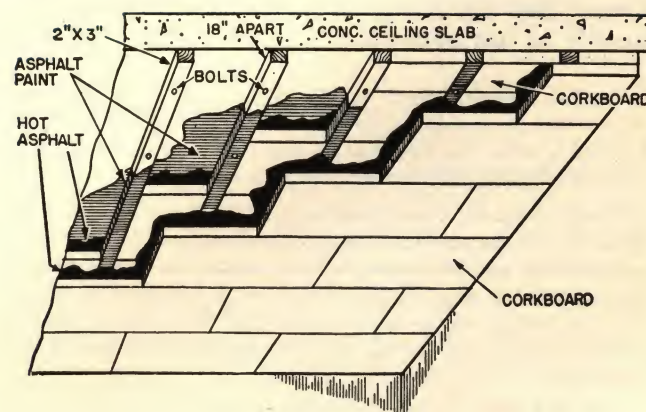
(Two layers of Corkboard, both layers applied in hot asphalt.)

The concrete ceiling slab must first be thoroughly cleaned of all dirt, dust, loose mortar, etc. Wooden nailing strips 2 3/4" wide x (thickness of first layer of corkboard) shall be affixed to the underside of the concrete ceiling with suitable anchors. Nailing strips shall be spaced 18" apart.

Both concrete slab and nailing strips shall then be given one good coat of Corinco Asphalt Priming Paint. When paint has dried, the first layer of Corinco Corkboard shall be applied in hot asphalt against the concrete slab, tightly fitted between nailing strips and toe-nailed to same with special head galvanized wire nails.

A second layer of Corinco Corkboard shall be applied in hot asphalt, additionally secured to the first layer with wooden skewers and nailed to nailing strips with special head galvanized wire nails.

All joints must be butted tight; all edges and ends kept clean. Joints in the second layer must be broken with respect to those in the first layer.



The exposed surfaces of Corkboard shall be finished as described under "Finishes."

CEILINGS—concrete

(Two layers of Corkboard, first layer applied in concrete forms, second layer applied in hot asphalt.)

The concrete ceiling forms in which the first layer of corkboard is to be placed shall be lowered (thickness of corkboard) and the first layer of Corinco Corkboard shall be laid dry in same. After concrete reinforcing has been laid, special head galvanized wire nails, $1\frac{1}{2}$ " longer than the thickness of the corkboard, shall be

driven obliquely into the cork boards using approximately eight nails to each board. The heads shall be left protruding approximately $1\frac{1}{2}$ ". The concrete shall be poured directly upon the corkboard.

After the concrete has set and the forms have been removed, a second layer of Corinco Corkboard shall be applied in hot asphalt, additionally secured to the first layer with wooden skewers.

All joints must be butted tight, keeping edges and ends clean, and transverse joints in the first layer broken. Joints in the second layer must be broken with respect to those in the first layer.

The exposed surfaces of Corkboard shall be finished as described under "Finishes."

CEILINGS—wood sheathed

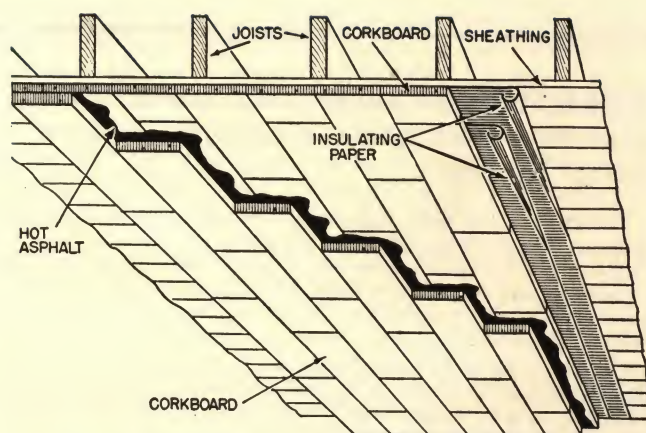
(Two layers of Corkboard, first layer nailed, second layer applied in hot asphalt.)

Directly against underside of wood sheathing two layers of waterproof insulation paper shall be applied, with edges well lapped.

The first layer of Corinco Corkboard shall be applied against paper secured to wood sheathing with special head galvanized wire nails.

A second layer of Corinco Corkboard shall be applied in hot asphalt additionally secured to the first layer with wooden skewers.

All joints must be made tight and proper care exercised to keep edges and ends clean. Transverse joints in first layer must be broken and all joints in second layer broken with respect to those in the first layer.



The exposed surfaces of Corkboard shall be finished as specified under "Finishes."

CEILINGS—tee-iron construction

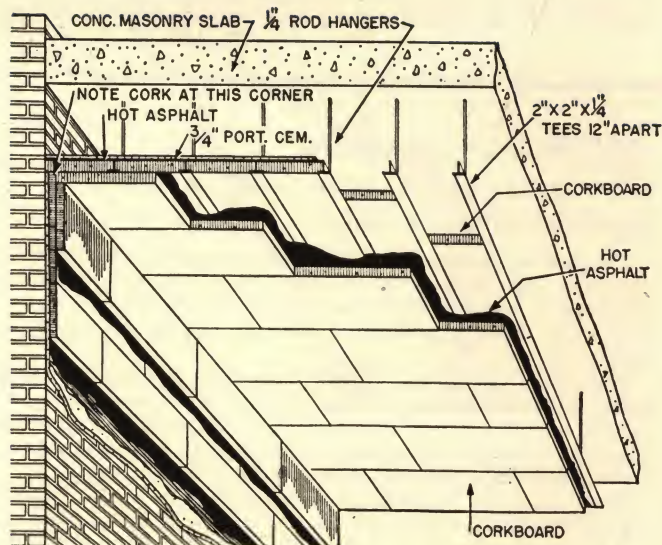
(Two layers of Corkboard, first layer laid between tee-irons, second layer applied underneath, in hot asphalt.)

The Tee-irons shall be $2" \times 2" \times \frac{1}{4}"$ spaced 12" or 18" apart, ends resting on walls or other supporting structures and securely fastened to same. The tees shall be supported every 10 or 12 feet in length by hanger rods or other suitable means.

The first layer of Corinco Corkboard shall be placed between the Tee-irons with the edges rabbeted to fit on flanges of the tees tightly and rest flush with the bottom. A heavy layer of hot asphalt shall be applied over the upper surface of corkboard, followed by a coat of Portland cement mortar approximately $\frac{3}{4}"$ thick, mixed one part Portland cement and three parts clean, sharp sand screeded to a level finish.

A second layer of Corinco Corkboard shall be applied to the underside of the first layer in hot asphalt, additionally secured with wooden skewers.

All joints shall be butted tight and broken with respect to those of



the first layer. The exposed surfaces of Corkboard shall be finished as described under "Finishes."

FLOORS—wood

(Two layers of Corkboard, both layers laid in hot asphalt.)

On top of wood sheathing or flooring two layers of insulating paper shall be laid, all edges well lapped.

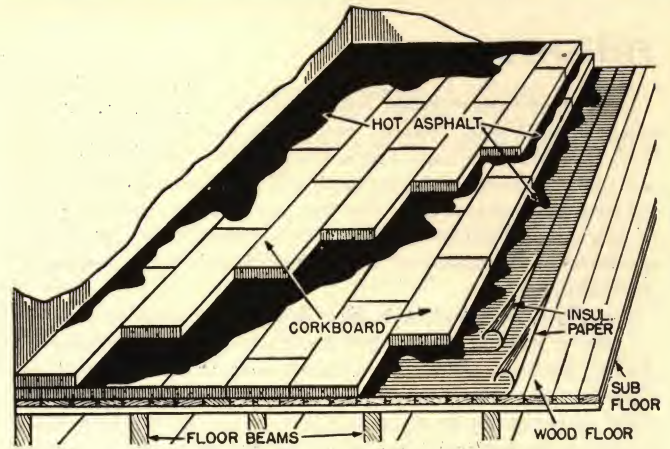
The first layer of Corinco Corkboard shall be laid in hot asphalt directly on top of insulating paper.

A second layer of Corinco Corkboard shall be laid in hot asphalt upon the first layer.

The upper surface of the second layer shall be given a heavy coat of hot asphalt, left ready to receive a protective wearing finish as described under "Finishes."

All joints must be butted tight, edges and ends kept clean.

Transverse joints in first layer must be broken. All joints in the second layer must be broken with respect to those in first layer.



Note: If a wooden wearing finish is to be installed over upper surface of second layer, wooden sleepers 4" wide by the thickness of corkboard used shall be inserted in second layer 18" or 24" apart.

FLOORS—concrete base

(Two layers of Corkboard, both layers applied in hot asphalt.)

The concrete base on which the insulation is to be applied must be smooth and level. The first layer of Corinco Corkboard shall be laid on top in hot asphalt.

A second layer of Corinco Corkboard shall be laid in hot asphalt upon the first layer.

The upper surface of the second layer shall be given a heavy coat of hot asphalt, left ready to receive a protective wearing finish as described under "Finishes."

All joints must be butted tight, edges and ends kept clean.

Transverse joints in first layer must be broken. All joints in the second layer must be broken with respect to those in first layer.

Note: If a wooden wearing finish is to be installed over upper surface of second layer, wooden sleepers 4" wide by the thickness of corkboard used shall be inserted in second layer 18" or 24" apart.

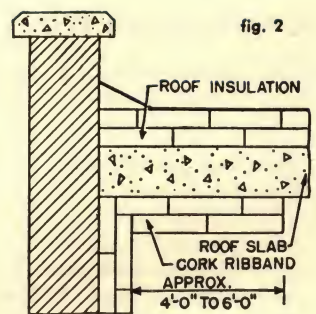
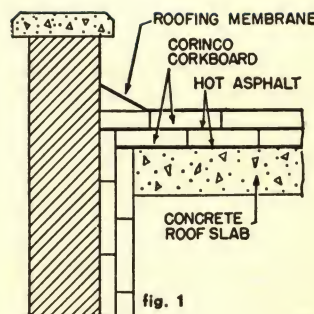
ROOFS—concrete and wood

(Two layers of Corkboard, both layers applied in hot asphalt.)

A slot shall be provided in concrete roof slab along all side walls wide enough to permit full thickness of insulation on walls joining with that of roof. (See Section Fig. 1.) The roof slab shall be smooth and level. Apply first layer of Corinco Corkboard in hot asphalt. Apply a second layer of Corinco Corkboard in hot asphalt on top of first layer. The upper surface of second layer shall be left uncoated over which a roofing membrane shall be laid. All joints must be butted tight, transverse joints in the first layer shall be broken and all joints in second layer shall be broken in respect to those in the first layer.

Note: If the insulation is to be applied on top of a wooden roof structure, one layer of waterproof insulating paper with the edges lapped at least 3" shall first be applied to the wood sheathing, and the insulation then applied in hot asphalt as specified for concrete slab.

Ribbands. In the event it is not possible to provide a slot in roof slab permitting the joining of wall and roof insulation, a ribband of cork shall be applied to the underside of slab. This ribband shall extend out from walls approximately 4'0" to 6'0" and shall be applied as per specifications for ceilings. (See Section Fig. 2.)



Heat loss table for roofs

Type of construction (with 3/8" roofing)	Heat loss with Corinco corkboard					
	No. ins.	1"	1 1/2"	2"	3"	4"
2" concrete slab	.658	.206	.153	.122	.087	.067
3" concrete slab	.610	.201	.151	.120	.086	.067
4" concrete slab	.568	.197	.148	.118	.085	.066
6" concrete slab	.500	.187	.143	.115	.083	.065
2" yellow pine	.345	.160	.127	.105	.078	.062
3" yellow pine	.256	.138	.112	.095	.072	.058

FINISHES

1. Portland Cement Finish. Finish exposed cork surfaces on walls and partitions with Portland cement plaster approximately $\frac{1}{2}$ " thick applied in two coats. Plaster shall be mixed in the proportions of 2 parts clean, sharp, brown sand, one part Portland cement, and not over 5% hydrated lime. The first coat shall be applied directly to cork surfaces and be approximately $\frac{1}{4}$ " thick. This coat shall be scratched in two directions and allowed to dry before application of second coat.

The second coat shall be brought to an even surface by means of a darby or straight edge. After the plaster has set sufficiently, it shall be floated or troweled to a smooth, even finish. All angles and corners shall be clean and true, and outside corners protected with metal corner beads. To minimize shrinkage cracks, the plaster shall be scored into approximately three foot squares going through the finish to the scratch coat.

2. Corinco Mastic Finish. Finish the exposed cork surfaces of walls, partitions, ceilings, etc., in two coats. All surfaces to be finished shall be first thoroughly cleaned, removing film of dust and all loose particles, etc. The first coat can be either Mastiprime or

Masticote as taken from the container and troweled on. This coat should be permitted to dry approximately twenty-four hours. The second coat can be (1) Masticote with two parts clean, sharp sand added on the job for each part Masticote, (2) Mastimix may be used for this second coat as it comes from the container as it already has sand incorporated. This second coat should be approximately $\frac{3}{16}$ " in thickness. After it has set sufficiently but before it has hardened, which will depend upon drying conditions, these surfaces shall be finished with a steel trowel.

These materials should not be applied at temperatures below zero.

3. Monolithic Concrete Wearing Floor. A Monolithic concrete wearing floor shall be laid over the floor insulation approximately 3" thick at the low point and sloping to drain approximately 1" in ten feet. Screeds shall be set to determine the proper level or slope. The concrete shall be mixed one part Portland cement, 2 parts clean, sharp sand, and 4 parts of crushed stone or gravel, and only wet enough to flush under slight tamping.

After the concrete has sufficiently set, it shall be floated to a smooth, even surface and then finished with a steel trowel.

COLD STORAGE DOORS

It is highly important that scientifically designed, well constructed cold storage doors of the proper size and type be used in connection with all refrigerated rooms. As a matter of fact, these doors constitute practically the only moving part of a cold storage room and as they are constantly used should swing easily, close tightly and, of course, be well insulated. Corinco corkboard has proven an excellent insulation material for all types of cold storage doors for the same

reasons that make it the top insulation material for the room itself. In general, doors are of two types, the infitting type for moderate temperatures and the overlapping super freezer door for low temperatures. In conclusion, it is strongly suggested that an experienced insulation engineer be consulted as to the exact type of door best suited to the problem at hand, and, secondly, that pure corkboard be specified as the insulation.

FREEZING TANKS

Specification No. 1

(Two layers of Corkboard on bottom, sides adjacent building walls insulated with regranulated cork.)

Bottom. The floor slab is to be smooth and level on which the first layer of Corinco Corkboard shall be embedded in hot asphalt. The second layer of Corinco Corkboard shall be applied on top of the first layer in hot asphalt, and the upper surface flooded with a heavy coat of the same material. The insulation must extend to the outside of the insulation on the sides of the tank. All joints shall be butted tight and transverse joints in the first layer broken. All joints in the second layer shall be broken with respect to those in the first layer.

Sides. The building wall shall be mopped with hot asphalt to height of tank. The space between wall and tank, approximately 12" wide, shall then be filled in with regranulated cork well tamped in place.

Over the top of the side insulation and extending in to meet the can framing, a curbing shall be constructed consisting of two layers of $\frac{7}{8}$ " Tongue and Groove boards with two layers of waterproof insulating paper between. The curbing shall be properly supported.

Specification No. 2

(Two layers of Corkboard on bottom with regranulated and corkboard on exposed sides.)

Bottom. The bottom shall be insulated as described in Specification No. 1.

Sides. 2x4 studding shall be erected against the sides of tank on 18" centers. One layer of corkboard shall be nailed to studding with special galvanized nails. The space between the corkboard and tank shall be filled with regranulated cork well packed in place.

All joints between cork boards shall be butted tight and vertical joints broken. The exposed surfaces of corkboard shall be finished as described under "Finishes".

A curbing shall be installed over top of insulation suitably supported as described in Specification No. 1.

Specification No. 3

(Two layers of Corkboard on bottom, sides regranulated cork.)

Bottom. The bottom shall be insulated as described in Specification No. 1.

Sides. 3x4 studding approximately 18" on centers shall be erected approximately 12" away from the tank sides. Studding shall be sheathed on the outside with two layers of $\frac{7}{8}$ " Tongue and Groove boards with two layers of insulating paper between. The first layer of Tongue and Groove boards shall be nailed horizontally and the second layer vertically. The space between the tank and the retaining wall shall be filled with regranulated cork well tamped in place.

The curbing as described in Specification No. 1 shall be constructed over the top of the side insulation and extending in to meet the can framing.

SUNDRIES

Corinco Fine Regranulated Cork. Baked ground cork. Passes 8 mesh screen. Excellent fill insulation. Packs approximately 6 lbs. per cubic foot. Shipped in bags 25 to 30 lbs.

Corinco 8/20 Granulated Cork. Unbaked ground cork. Passes through 8 mesh screen. Retained on 20 mesh screen. Has many industrial and commercial uses. Packs approximately 10 lbs. per cubic foot. Shipped in bags 35 to 40 lbs.

Corinco Erection Asphalt. High grade odorless cold storage asphalt 180°-190° melting point, furnished in 100 lb. cartons or 450 lb. drums. Can also be furnished 240° melting point for jobs where temperatures might run excessively high. Average covering capacity, 4/10 lb. per sq. ft.

Corinco Coldphalt. Odorless liquid erection asphalt to be used in place of hot asphalt when the latter would be objectionable due to the fumes or on a small job when the cost of handling and heating regular asphalt would be excessive. Weight approximately 11½ lbs. per gal. Covering capacity 25 sq. ft. per gal.

Corinco Asphalt Priming Paint. Cut back type asphalt primer for priming masonry, plaster or metal surfaces before application of insulation. Covering capacity about 150 sq. ft. per gal. Weight 11 lbs. per gal.

Corinco Mastiprime. (A straight asphalt emulsion without fibre.) To be used for the priming coat of two coat emulsion finish. Covering capacity about 30 sq. ft. per gal. troweled on. Weight 11 lbs. per gal. Fibre and/or sand can be mixed with this material at job site.

Corinco Masticote. Trowel coat asphalt emulsion with asbestos fibres added to be used as second coat asphalt emulsion with Mastiprime. Covering capacity about 15 sq. ft. per gal. Weight 11 lbs. per gal. Sand can be mixed with this material at job site.

Corinco Mastimix. Pre-mixed asphalt emulsion containing fibre and sand ready to apply on primed insulation surfaces to give added finish. Covering capacity approximately 10 sq. ft. per gal. Weight 12 lbs. per gal.

Corinco Weathercote. An excellent protective coating, emulsion type, heavily asbestos fibred for weatherproofing surfaces exposed to the elements. Covering capacity 15 sq. ft. per gal. (1/8" thickness). Weight approximately 12 lbs. per gal.

Corinco Aluminum Cold Storage Paint. High quality aluminum paint for use over asphalt emulsion surfaces. An excellent sealer to prevent asphalt from bleeding through. Can be used either as a primer for other paints or left as aluminum finish if desired. Covering capacity 250 sq. ft. per gal., two coats. Weight 10 lbs. per gal.

Corinco Cold Storage Enamel. A high quality enamel for use over asphalt emulsion. Asphalt will not bleed through. One coat satisfactory but two coats recommended. Covering capacity 300 to 350 sq. ft. per gal., one coat brush job; 350 to 450 sq. ft. per gal., one coat spray job. Weight 12½ lbs. per gal.

Corinco Gumbo Cement Type H. A waterproof heavy consistency cement, very suitable for erecting single layer insulation against metal ducts, plaster, glass and other surfaces. Covering capacity 30 to 35 sq. ft. per gal. Best applied with notched trowel. Weight 12 lbs. per gal.

Corinco Gumbo Cement Type M. A waterproof cement very similar to Corinco Gumbo Type H except lighter consistency. Covering capacity 40 to 50 sq. ft. per gal. Best applied with notched trowel. Weight 12 lbs. per gal.

Corinco Waterproof Cork Covering Cement. A high grade cement of proper consistency for the application of cork pipe covering. Used to cement the two halves of cork pipe covering, fitting covers and cork lagging. Covering capacity per gal. about 35 sq. ft. of cork surface. Weight approximately 14 lbs. per gal.

Corinco Cork Covering Paint. A waterproof asphaltic base paint for cork pipe covering and fittings. Can be used for protective asphalt coating on practically all types of surfaces. Covering capacity on cork pipe covering approximately 150 sq. ft. per gal. Weight 11 lbs. per gal.

Corinco Cork Covering Seam Filler. A filler of heavy consistency for the sealing of joints in cork pipe covering and fittings. Figure about 200 lineal feet of joint per gal. Weight 12 lbs. per gal.

Corinco Brine Putty. For filling joints between pipe fittings and cork fitting covers. Also used for filling voids of all kinds in cold storage work. Weight about 54 lbs. per cubic foot.

Corinco Paraffin and Cork Dust. 60% paraffin, 40% cork dust by weight. Paraffin to be melted and mixed with the dust at the job site. Can be used instead of Brine Putty between cork pipe covers and fittings.

Corinco Copper Clad Steel Wire. Copper jacketed steel wire for the application of cork covering or for wiring insulation on ducts and tanks. Gauges of wire to be used for various sizes of pipe covering are as follows:

Covering (in.)			B. & S. wire ga.	Diam. of wire (in.)	Feet per pound	Wt. per lineal foot of wire (lbs.)
Light Duty	Standard	Heavy Duty				
¼ to 3	¼ to 1½	¼ to ¾	14	.064	86.95	.0115
3½ to 10	2 to 8	1 to 6	12	.081	54.63	.0183
12 and up	9 and up	8 and up	10	.102	34.36	.0291

Corinco Insulating Paper. Glazed waterproof paper weighing about 35 lbs. per roll. Excellent air stop for applying over wood sheathing before erection of insulation.

Corinco Special Head Galvanized Wire Nails.

For erecting first layer of insulation. In general, figure 2 nails per square foot on walls, 3 nails per square foot on ceiling.

Length (in.)	Lbs. per nail
3	.0166
3½	.0192
4	.0222
5	.0333
5½	.0344
6½	.0435
7½	.05

Corinco Skewers. Treated hardwood skewers. For applying second and additional layers of insulation. Packed 1000 per carton.

Size (in.)	Net wt. per M (lbs.)
4½ x ¼	5
5 x ¼	5½
5½ x ¼	6½
6 x ¼	7
6½ x ¼	7½
7 x ¼	10



Applying cork covers on screwed fittings.



Securing covering with copper clad wire.



Above: Smoothing joints and chipped edges with seam filler.
Below: Finishing with Corinco Cork Covering Paint.



CORINCO MOLDED CORK PIPE COVERING

It is important that all refrigerant and other cold lines be insulated for the following reasons:

1. To save the loss in refrigeration which can amount to a very substantial sum, depending, of course, on the length and size of the exposed piping and the temperatures carried.
2. To eliminate unsanitary conditions which result from moisture continually dripping from cold lines together with ending the unsightly appearance of this condition.
3. To greatly increase the life of the piping and equipment which is insulated as well as adjacent surfaces.

Corinco cork pipe covering is the ideal insulation for cold storage lines because:

1. It has high insulating efficiency.
2. It will last for many years due to the natural cellular construction plus the addition of a heavy mineral rubber finish.
3. It is furnished in exact dimensions to fit all sizes and types of pipe and fittings.
4. It is easily installed with a minimum amount of labor and requires little maintenance.
5. It will stand any reasonable amount of abuse and is not affected by moisture.

Minimum temperatures for various thicknesses of cork insulation

Figures in table are degrees Fahrenheit based on air temperature of 70° and with relative humidities up to 70% at 70° air temperature.

Pipe Diam. (in.)	Light Duty	Standard	Heavy Duty	Special Wall Thickness								
				4"	5"	6"	7"	8"	9"	10"	11"	12"
¼, ⅜, ½	20	-5	-70									
¾-1	20	-5	-70									
1¼-1½	25	0	-60									
2-2½	30	0	-50									
3-3½	30	0	-50									
4	35	0	-45	-55	-95	-140	-190	-235	-270			
5	35	0	-45	-50	-85	-125	-170	-215	-250			
6	40	0	-40	-40	-80	-120	-160	-200	-235	-265		
8	40	10	-35	-35	-70	-105	-140	-180	-215	-250		
10	50	10	-30	-30	-60	-95	-130	-165	-200	-235	-270	
12	50	15	-30	-30	-60	-90	-120	-160	-200	-235	-270	
14	50	15	-30	-30	-60	-85	-120	-155	-190	-225	-260	
16	50	20	-30	-30	-55	-85	-115	-145	-180	-215	-250	
18	50	20	-30	-30	-50	-80	-110	-140	-170	-200	-240	-280
20	50	20	-25	-25	-50	-75	-105	-135	-165	-195	-225	-255
22	50	20	-25	-25	-50	-75	-105	-135	-165	-195	-225	-255
24	50	20	-25	-25	-50	-75	-105	-135	-160	-190	-220	-250
30	50	20	-25	-25	-50	-70	-100	-130	-160	-185	-210	-240
36	50	20	-25	-25	-45	-70	-100	-125	-155	-180	-205	-230
42				-20	-45	-70	-100	-125	-150	-175	-200	-225
48				-20	-45	-70	-95	-120	-150	-175	-195	-220
54				-20	-45	-65	-95	-120	-145	-170	-190	-215
60				-20	-45	-65	-95	-115	-145	-170	-190	-210
72				-20	-40	-65	-90	-110	-135	-160	-180	-200
84				-15	-40	-60	-85	-105	-130	-150	-170	-195
96				-15	-35	-55	-80	-100	-125	-145	-165	-190
106				-15	-35	-55	-75	-95	-120	-140	-160	-185
120				-15	-35	-50	-70	-90	-115	-135	-155	-175
and over												

CORK COVERING SPECIFICATIONS

(All necessary sundries for application are included with the covering at no extra charge.)

All pipe and fittings should be clean, dry and free of rust. Cork covering of the proper thickness should be applied by cementing the half sections of covering together with Corinco Waterproof Cement, the joints being placed top and bottom. All voids between cork fitting covers and the pipe fittings should be filled with Corinco Brine Putty before applying the insulation, or should be poured using a mixture of paraffin and cork dust after the fitting covers have been applied. The cork covering should then be securely fastened by means of copper clad steel wire (stainless steel can be furnished at slight additional cost) spaced every eight inches on straight pipe covering and in accordance with best standard practice on fitting covers. All joints and seams in the covering and fittings should then be filled with Corinco Seam Filler after which the covering should be given a good coat of Corinco Cork Covering Paint.

DUCT INSULATION

Metal ducts are, in effect, square, rectangular or round pipes for the conveying of air. The insulation of ducts is extremely important due to the considerable surface area and they must be *well insulated* to maintain any semblance of efficiency in the system of which they are a part. Again, Corinco cork has proven an excellent material for all temperatures from the extreme minus to plus 180 degrees F. Corkboard is a fire retardant material, is easily applied, will last for years and its flexibility permits its use around bends and all curved surfaces. These advantages, together with its naturally high insulation efficiency, make cork the ideal insulation for air-diffusion systems.

DUCT INSULATION SPECIFICATIONS

All ducts should be cleaned and free of dust and all other material. Corinco corkboard should be applied over the areas to be insulated in one of the following manners:

(1) The corkboard should be coated with Corinco Gumbo Cement and firmly placed against the surface of the ducts. No shoring is required with this cement.

(2) The ducts should be primed with asphalt paint and the corkboard dipped in hot asphalt and then

Special Protective Finishes

(A) In places where humidity is extremely high or where maintenance would be unlikely or difficult it is recommended that the cork covering be wrapped with insulating tape of appropriate width (2" to 4"), and then given an additional coat of Cork Covering Paint.

(B) Where cork-insulated lines pass through kitchens, corridors or other spaces where asphalt finish might not be desirable, the insulation can be finished with a six- or eight-ounce canvas jacket neatly pasted (or sewed) in place.

(C) Where cork-insulated lines are exposed to the elements or other severe conditions they should be covered with a good quality roofing jacket secured in place with copper clad or stainless steel wire. Fitting covers or other surfaces which, due to their contour preclude the application of roofing paper, should be covered with a heavy coat of Corinco Weathercote.

(D) Where extreme conditions exist and it should be desirable to further protect cork covering against unusual abrasion or weather conditions it should be covered with a galvanized metal jacket applied over the insulation in accordance with best standard practice.

applied immediately to the primed surface.

(3) The corkboard can be applied directly to the ducts without cement or asphalt and securely fastened in place by drilling holes through the corkboard and the duct and fastening the corkboard with hardened metal screws and roofing caps.

After the ducts have been insulated in any one of the above manners the insulation can, if so desired, be additionally secured by means of metal bands and clips.

Finishes

The exposed surface of the corkboard can be finished in any one of the following manners:

(1) It can be left plain and all seams and joints buttered with asphalt emulsion.

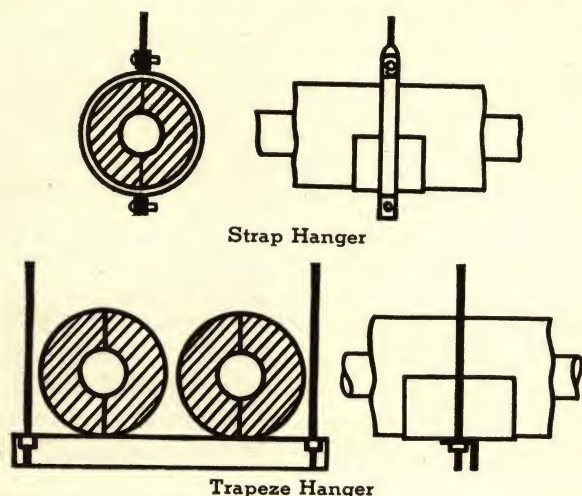
(2) All insulation surfaces can be given an asphalt emulsion finish applied in two coats to a total thickness of approximately $\frac{1}{8}$ ".

(3) The insulation can be finished with either Portland or Asbestos cement plaster applied in two coats to a total thickness of approximately $\frac{3}{8}$ ". (The use of wire mesh is optional as corkboard itself gives a good key for plaster finish.)

(3a) After the insulation has been plastered, if so desired, it can be covered with a six-ounce canvas jacket.

PIPE HANGERS

All pipe lines to be insulated with Corinco covering should be supported by hangers and the covering protected by a sheet iron shield where the pipe rests in the hanger. This shield should be shaped to fit the covering and should extend 4" away from each side of the hanger (see illustration below) and should extend up the sides to the level center of the pipe. It is not advisable to apply the hanger direct to the pipes.



SPACING TABLE

Thickness	Fittings	Space between parallel pipes (in.)	Space between pipes and adjacent surfaces (in.)
Light Duty	Screwed fittings up to and including 6"	6	4
	Screwed fittings larger than 6"	10	5
	Flanged fittings		
Standard	Screwed fittings up to and including 6"	8	6
	Screwed fittings larger than 6"	14	8
	Flanged fittings		
Heavy Duty	Screwed fittings up to and including 3"	10	8
	Screwed fittings larger than 3"	18	12
	Flanged fittings		

COMPARATIVE HEAT LOSSES

Transmission in B.T.U.'s per hour, per deg. F. diff. per lineal foot

How to use table

To determine the loss on 400 feet of 3-inch bare pipe, based on a temperature difference between the pipe and the outside air of 90 deg. per day, multiply number of feet by coefficient by temperature difference by 24 hours.

$$400 \times 1.948 \times 90 \times 24 = 1,683,072 \text{ B.T.U.'s.}$$

Dividing this by 288,000 (B.T.U.'s per ton) gives 5.844 the tons of refrigeration lost per day.

To determine the corresponding loss for insulated pipe substitute the coefficient for bare pipe with that of the contemplated insulation.

The saving effected by the use of cork insulation is the difference between tons of refrigeration lost for bare pipe and that lost through cork insulated pipe.

Nominal pipe size (in.)	Bare pipe	Cork insulation		
		Light Duty	Standard	Heavy Duty
1/4	.452	.0802	.0713	.0611
3/8	.494	.0906	.0976	.0670
1/2	.566	.104	.0895	.0742
3/4	.670	.111	.0973	.0829
1	.817	.121	.105	.0873
1 1/4	1.005	.135	.110	.0959
1 1/2	1.130	.155	.116	.104
2	1.383	.175	.131	.113
2 1/2	1.650	.207	.145	.132
3	1.948	.215	.157	.147
3 1/2	2.20	.236	.167	.156
4	2.44	.254	.192	.163
5	2.97	.300	.211	.173
6	3.50	.328	.238	.187
8	4.45	.400	.276	.227
10	5.48	.457	.329	.268
12	6.48	.658	.377	.303
14	7.09	.712	.415	.327
16	8.15	.819	.462	.363
18	9.11	.867	.509	.405
20	10.10	.972	.553	.438

DIMENSION TABLE for Corinco cork covering

NOMINAL PIPE (All dimensions are given in inches)

Nominal pipe Size	O. D. pipe	LIGHT DUTY		STANDARD		HEAVY DUTY		Nominal 4" Wall thickness		Nominal 5" Wall thickness		Nominal 6" Wall thickness	
		O. D. Cover- ing	Wall thick- ness	O. D. Cover- ing	Wall thick- ness	O. D. Cover- ing	Wall thick- ness	O. D. Cover- ing	Wall thick- ness	O. D. Cover- ing	Wall thick- ness	O. D. Cover- ing	Wall thick- ness
¼	.540	3.25	1.36	4.25	1.86	5.88	2.67	8.87	4.16	11.12	5.29	12.25	5.86
⅜	.675	3.25	1.29	4.25	1.79	5.88	2.60	8.87	4.10	11.12	5.22	13.25	6.28
½	.840	3.25	1.21	4.25	1.71	5.88	2.52	8.87	4.01	11.12	5.14	13.25	6.20
¾	1.050	3.75	1.35	4.75	1.85	6.38	2.67	8.87	3.91	11.12	5.03	13.25	6.09
1	1.315	4.25	1.47	5.38	2.03	7.25	2.97	9.62	4.16	11.12	4.90	13.25	5.96
1¼	1.660	4.50	1.42	6.38	2.36	7.88	3.11	9.62	3.98	12.25	5.30	14.50	6.42
1½	1.900	4.75	1.43	6.88	2.49	7.88	2.99	9.62	3.86	12.25	5.18	14.50	6.30
2	2.375	5.38	1.50	7.25	2.44	8.88	3.25	10.12	3.88	12.25	4.94	14.50	6.06
2½	2.875	5.88	1.50	7.88	2.50	9.63	3.38	11.12	4.12	13.25	5.18	14.50	5.81
3	3.500	6.88	1.69	8.88	2.69	10.13	3.32	12.25	4.38	13.25	4.87	15.50	6.00
3½	4.000	7.25	1.63	9.63	2.81	11.13	3.57	12.25	4.13	14.50	5.25	16.00	6.00
4	4.500	7.88	1.69	10.13	2.81	12.25	3.88	13.25	4.37	14.50	5.00	16.50	6.00
5	5.563	8.88	1.66	11.13	2.78	13.25	3.84	14.50	4.47	15.56	5.00	17.56	6.00
6	6.625	10.13	1.75	12.25	2.81	14.50	3.94	14.50	3.94	16.62	5.00	18.62	6.00
8	8.625	12.25	1.81	14.50	2.94	16.63	4.00	16.62	4.00	18.62	5.00	20.62	6.00
10	10.750	13.75	1.50	16.75	3.00	18.75	4.00	18.75	4.00	20.75	5.00	22.75	6.00
12	12.750	15.75	1.50	18.75	3.00	20.75	4.00	20.75	4.00	22.75	5.00	24.75	6.00
14	14.000	17.00	1.50	20.00	3.00	22.00	4.00						
16	16.000	19.00	1.50	22.00	3.00	24.00	4.00						
18	18.000	21.00	1.50	24.00	3.00	26.00	4.00						
20	20.000	23.00	1.50	26.00	3.00	28.00	4.00						

Wall thickness over 6" will be actual
thickness specified for all pipe sizes.

TUBING COVERING (All dimensions are given in inches)

Tubing O. D.	LIGHT DUTY		STANDARD		HEAVY DUTY		Tubing O. D.	LIGHT DUTY		STANDARD		HEAVY DUTY	
	O. D. Cover- ing	Wall thick- ness	O. D. Cover- ing	Wall thick- ness	O. D. Cover- ing	Wall thick- ness		O. D. Cover- ing	Wall thick- ness	O. D. Cover- ing	Wall thick- ness	O. D. Cover- ing	Wall thick- ness
⅜	3.25	1.43	4.25	1.93	5.88	2.74	2⅞	4.74	1.30	6.88	2.37	7.87	2.87
½	3.25	1.37	4.25	1.87	5.88	2.68	2⅝	5.38	1.37	7.25	2.30	8.87	3.12
⅝	3.25	1.30	4.25	1.80	5.88	2.62	3⅞	5.88	1.36	7.88	2.37	9.62	3.24
⅞	3.25	1.18	4.25	1.68	5.88	2.49	3⅝	6.88	1.62	8.88	2.62	10.12	3.24
1⅞	3.75	1.30	4.75	1.80	6.38	2.62	4⅞	7.25	1.55	9.63	2.74	11.12	3.49
1⅝	4.25	1.43	5.38	1.99	7.25	2.93	5⅞	7.88	1.37	10.13	2.49	12.25	3.55
1⅝	4.50	1.43	6.38	2.37	7.88	3.12	6⅞	8.88	1.37	11.13	2.49	13.25	3.55

LIST PRICES

TABLE 1—LIGHT DUTY (formerly Ice Water Thickness)

Iron Pipe Size (in.)	Iron Pipe Covering per Lineal Foot	STANDARD (125 LB.) SCREWED FITTINGS		EXTRA HEAVY (250 LB.) and AMMONIA SCREWED FITTINGS		STANDARD, EXTRA HEAVY, AMMONIA FLANGED FITTINGS		←WELD and SWEAT→ FITTINGS	Copper Tubing Pipe Size (in.)	Copper Tubing Covering per Lineal Foot
		Ells (90° & 45°); Tees; Unions	Globe, Angle Gate Valves	Ells (90° & 45°); Tees; Unions	Globe, Angle Gate Valves	Ells (90° & 45°); Tees; Globe, Angle Gate Valves	Flanges	Ells (90° & 45°); Tees		
1/4	\$1.00	\$1.30	\$1.50	\$1.40	\$1.80*	\$4.00	\$1.60	\$1.40	3/8	\$1.00
3/8	1.00	1.30	1.50	1.40	1.80*	4.00	1.60	1.40	1/2	1.00
1/2	1.00	1.30	1.50	1.40	1.80*	4.00	1.60	1.40	3/4	1.00
3/4	1.10	1.50	1.80	1.60	2.30*	4.50	1.80	1.50	3/4, 7/8	1.10
1	1.20	1.60	2.30	1.80	3.10*	5.00	2.00	1.60	1 1/8	1.20
1 1/4	1.30	1.80	3.10	2.00	4.00*	5.50	2.20	2.00	1 1/4	1.30
1 1/2	1.40	2.00	4.00	2.50	5.40*	6.30	2.40	2.20	1 1/2	1.40
2	1.60	2.50	5.40*	3.00	6.80*	7.50	2.70	3.00	1 3/8, 2 1/8	1.60
2 1/2	1.70	3.00	6.80*	3.50	8.30*	8.50	3.10	3.50	2 1/8	1.70
3	2.20	3.50	8.30*	4.00	9.80*	9.70	3.50	4.20	3 1/8	2.50
3 1/2	2.60	4.00	9.80	4.50	11.30	11.00	3.90	4.80	3 3/8	3.00
4	3.00	4.50	11.30	5.50	14.30	12.20	4.20	5.50	4 1/8	3.50
5	3.50	5.50	14.30	6.70	17.30	14.50	5.00	6.70	5 1/8	4.00
6	4.20	6.70	17.30	9.00	23.30	17.00	5.70	8.00	6 1/8	5.00
8	5.50	13.50	23.30	16.50	29.00	33.00	12.20	16.00		
10	7.60					39.80	14.80	19.50		
12	8.60					47.30	17.40	23.50		
14	9.20					54.70	19.90	27.00		
16	11.30					62.30	22.40	31.00		
18	12.60					69.70	25.00	34.50		
20	14.00					77.30	27.50	38.50		
22	15.40									
24	16.80									
26	18.20									
28	19.60									
30	21.00									
32	22.40									
34	23.80									
36	25.20									

*Made in both screwed and bolted bonnet patterns. Unless specified, we will furnish screwed bonnet for standard and extra heavy valves up to 2" and for ammonia valves up to 1 1/2".

Long Turn, Long Sweep, and Long Radius fitting covers take same price as respective regular fitting covers.

Sweat Valves take same price as standard screwed valves.

TABLE 2—STANDARD (formerly Brine Thickness)

Iron Pipe Size (in.)	Iron Pipe Covering per Lineal Foot	STANDARD (125 LB.) SCREWED FITTINGS		EXTRA HEAVY (250 LB.) and AMMONIA SCREWED FITTINGS		STANDARD, EXTRA HEAVY, AMMONIA FLANGED FITTINGS		←WELD and SWEAT→ FITTINGS	Copper Tubing Pipe Size (in.)	Copper Tubing Covering per Lineal Foot
		Ells (90° & 45°); Tees; Unions	Globe, Angle Gate Valves	Ells (90° & 45°); Tees; Unions	Globe, Angle Gate Valves	Ells (90° & 45°); Tees; Globe, Angle Gate Valves	Flanges	Ells (90° & 45°); Tees		
1/4	\$1.20	\$1.50	\$2.00	\$1.60	\$2.20*	\$6.00	\$2.30	\$1.70	3/8	\$1.20
3/8	1.20	1.50	2.00	1.60	2.20*	6.00	2.30	1.70	1/2	1.20
1/2	1.20	1.50	2.00	1.60	2.20*	6.00	2.30	1.70	3/4	1.20
3/4	1.30	1.70	2.20	2.00	3.00*	7.00	2.70	2.00	3/4, 7/8	1.30
1	1.50	1.90	3.00	2.40	4.20*	8.40	3.10	2.30	1 1/8	1.50
1 1/4	2.00	2.50	4.20	2.90	5.50*	9.50	3.50	3.00	1 1/4	2.00
1 1/2	2.30	3.00	5.50	4.00	8.00*	11.00	3.90	3.60	1 1/2	2.30
2	2.40	3.70	8.00*	4.90	10.30*	13.50	4.70	4.50	1 3/8, 2 1/8	2.40
2 1/2	3.00	4.70	10.30*	5.80	12.00*	16.00	5.50	5.50	2 1/8	3.00
3	3.50	6.30	12.00*	7.00	15.00*	18.50	6.30	7.00	3 1/8	3.70
3 1/2	3.80	7.50	15.00	8.40	17.50	21.00	7.10	8.50	3 3/8	4.20
4	4.00	8.60	17.50	10.00	22.50	23.50	7.90	9.50	4 1/8	4.60
5	5.20	10.50	22.50	12.00	27.30	28.50	9.60	11.50	5 1/8	5.50
6	6.00	14.00	27.30	16.00	37.00	33.50	11.20	14.50	6 1/8	6.30
8	7.50	24.00	37.00	30.00	47.00	65.30	24.50	28.00		
10	11.00					80.30	29.90	34.50		
12	12.00					95.30	35.70	41.50		
14	14.00					110.00	41.60	49.00		
16	15.40					125.00	47.60	55.50		
18	17.20					140.00	53.50	62.50		
20	19.00					155.00	59.50	69.00		
22	20.90									
24	22.80									
26	24.60									
28	26.50									
30	28.40									
32	30.20									
34	32.20									
36	34.20									

*Made in both screwed and bolted bonnet patterns. Unless specified, we will furnish screwed bonnet for standard and extra heavy valves up to 2" and for ammonia valves up to 1 1/2".

Long Turn, Long Sweep, and Long Radius fitting covers take same price as respective regular fitting covers.

Sweat Valves take same price as standard screwed valves.

TABLE 3—HEAVY DUTY (formerly Special Thick Brine)

Iron Pipe Size (in.)	Iron Pipe Cover- ing per Lineal Foot	STANDARD (125 LB.) SCREWED FITTINGS		EXTRA HEAVY (250 LB.) and AMMONIA SCREWED FITTINGS		STANDARD, EXTRA HEAVY, AMMONIA FLANGED FITTINGS		←WELD and SWEAT→ FITTINGS	Copper Tubing Pipe Size (in.)	Copper Tubing Cover- ing per Lineal Foot
		Ells (90° & 45°); Tees; Unions	Globe, Angle Gate Valves	Ells (90° & 45°); Tees; Unions	Globe, Angle Gate Valves	Ells (90° & 45°) Tees; Globe, Angle Gate Valves	Flanges	Ells (90° & 45°); Tees		
1/4	\$2.10	\$2.70	\$3.50	\$3.20	\$4.00*	\$8.50	\$3.60	\$3.00	3/8	\$2.30
3/8	2.10	2.70	3.50	3.20	4.00*	8.50	3.60	3.00	1/2	2.30
1/2	2.10	2.70	3.50	3.20	4.00*	8.50	3.60	3.00	3/4	2.30
3/4	2.30	3.20	4.00	3.60	4.70*	9.20	3.90	3.40	3/4, 7/8	2.60
1	2.80	3.60	4.70	4.20	6.00*	10.50	4.40	3.80	1 1/8	2.80
1 1/4	3.20	4.20	6.00	4.80	7.20*	11.70	4.80	4.50	1 1/4	3.20
1 1/2	3.40	4.80	7.20	6.10	9.70*	13.00	5.40	5.20	1 1/2	3.60
2	3.80	6.10	9.70*	7.20	12.20*	15.50	6.40	6.50	1 1/2, 2 1/8	4.40
2 1/2	4.00	7.20	12.20*	8.30	14.70*	18.00	7.40	8.00	2 1/2	5.20
3	4.50	8.30	14.70*	9.50	17.20*	20.50	8.40	9.50	3 1/8	6.00
3 1/2	5.30	9.50	17.20	10.80	19.70	23.00	9.40	10.70	3 1/2	6.70
4	5.60	10.80	19.70	13.00	24.70	25.50	10.40	12.00	4 1/8	7.50
5	7.20	13.00	24.70	15.50	30.00	30.50	12.40	15.00	5 1/8	9.00
6	8.40	15.50	30.00	20.50	40.00	35.50	14.50	17.50	6 1/8	10.60
8	11.20	31.00	40.00	37.50	50.00	69.00	31.60	35.00		
10	14.00					83.30	38.10	43.50		
12	16.00					98.30	45.00	52.00		
14	17.30					113.00	51.80	60.00		
16	19.60					128.00	58.60	63.50		
18	21.80					143.00	65.50	76.50		
20	24.00					158.00	72.40	85.50		
22	26.30									
24	28.60									
26	30.90									
28	33.20									
30	35.50									
32	37.80									
34	40.10									
36	42.40									

*Made in both screwed and bolted bonnet patterns.
Unless specified, we will furnish screwed bonnet for standard and extra heavy valves up to 2" and for ammonia valves up to 1 1/2".

Long Turn, Long Sweep, and Long Radius fitting covers take same price as respective regular fitting covers.

Sweat Valves take same price as standard screwed valves.

TABLE 4—SPECIAL WALL THICKNESS (per lineal foot)

Pipe size (in.)	4"	5"	6"	7"	8"
3/4 and less	\$3.00	\$4.00	\$6.00	\$9.00	\$9.50
1	3.20	4.40	6.20	9.20	10.00
1 1/4	3.50	4.60	6.50	9.60	10.60
1 1/2	3.70	4.90	6.80	10.00	11.20
2	4.20	5.60	7.60	10.80	12.20
2 1/2	4.90	6.20	8.20	11.60	13.50
3	5.30	6.80	9.00	12.30	14.60
3 1/2	5.80	7.40	9.60	13.20	15.60
4	6.50	8.00	10.20	14.00	16.80
5	7.70	9.20	11.60	15.60	19.00
6	Heavy Duty	10.50	13.00	17.20	21.30
8	Heavy Duty	13.00	15.80	20.40	26.00
10	Heavy Duty	15.40	18.50	23.70	30.00
12	Heavy Duty	18.00	21.20	26.80	35.00
14	Heavy Duty	20.40	24.00	30.00	39.00
16	Heavy Duty	23.00	26.70	33.00	44.00
18	Heavy Duty	25.40	29.40	37.00	48.00
20	Heavy Duty	28.00	32.00	40.00	53.00

List prices per fitting—
Special Wall Thickness

To determine list price of any fitting in any of the special wall thicknesses shown at left:

1. All screwed and weld fittings

I.P.S. up to 8": Multiply list price per ft. of covering x 3.0

I.P.S. 8" and over: Multiply list price per ft. of covering x 4.0

2 All flanged fittings

I.P.S. up to 8": Multiply list price per ft. of covering x 4.5

I.P.S. 8" and over: Multiply list price per ft. of covering x 8.0

3. All flanges

All I.P.S.: Multiply list price per ft. of covering x 3.0

Temperature conversion table

The numbers in the second column of each section refer to the temperature either in degrees Centigrade or Fahrenheit which it is desired to convert. If converting from Fahrenheit degrees to Centigrade degrees the equivalent temperature will be found in the left column, while if converting from degrees Centigrade to degrees Fahrenheit, the answer will be found in the column on the right. These Albert Sauveur temperature conversion tables are reproduced through the courtesy of University Press, Inc.

-60° to +53°			54° to 212°		
C		F	C		F
-51	-60	-76	12.1	54	129.2
-46	-50	-58	12.6	55	131.0
-40	-40	-40	13.2	56	132.8
-34	-30	-22	13.7	57	134.6
-29	-20	-4	14.3	58	136.4
-23	-10	14	14.8	59	138.2
-17.7	0	32	15.6	60	140.0
-17.2	1	33.8	16.1	61	141.8
-16.6	2	35.6	16.6	62	143.6
-16.1	3	37.4	17.1	63	145.4
-15.5	4	39.2	17.7	64	147.2
-15.0	5	41.0	18.2	65	149.0
-14.4	6	42.8	18.8	66	150.8
-13.9	7	44.6	19.3	67	152.6
-13.3	8	46.4	19.9	68	154.4
-12.7	9	48.2	20.4	69	156.2
-12.2	10	50.0	21.0	70	158.0
-11.6	11	51.8	21.5	71	159.8
-11.1	12	53.6	22.2	72	161.6
-10.5	13	55.4	22.7	73	163.4
-10.0	14	57.2	23.3	74	165.2
-9.4	15	59.0	23.8	75	167.0
-8.8	16	60.8	24.4	76	168.8
-8.3	17	62.6	25.0	77	170.6
-7.7	18	64.4	25.5	78	172.4
-7.2	19	66.2	26.2	79	174.2
-6.6	20	68.0	26.8	80	176.0
-6.1	21	69.8	27.3	81	177.8
-5.5	22	71.6	27.7	82	179.6
-5.0	23	73.4	28.2	83	181.4
-4.4	24	75.2	28.8	84	183.2
-3.9	25	77.0	29.3	85	185.0
-3.3	26	78.8	29.9	86	186.8
-2.8	27	80.6	30.4	87	188.6
-2.2	28	82.4	31.0	88	190.4
-1.6	29	84.2	31.5	89	192.2
-1.1	30	86.0	32.1	90	194.0
-.6	31	87.8	32.6	91	195.8
0	32	89.6	33.3	92	197.6
.5	33	91.4	33.8	93	199.4
1.1	34	93.2	34.4	94	201.2
1.6	35	95.0	34.9	95	203.0
2.2	36	96.8	35.5	96	204.8
2.7	37	98.6	36.1	97	206.6
3.3	38	100.4	36.6	98	208.4
3.8	39	102.2	37.1	99	210.2
4.4	40	104.0	37.7	100	212.0
4.9	41	105.8	38	100	212
5.5	42	107.6	43	110	230
6.0	43	109.4	49	120	248
6.6	44	111.2	54	130	266
7.1	45	113.0	60	140	284
7.7	46	114.8	65	150	302
8.2	47	116.6	71	160	320
8.8	48	118.4	76	170	338
9.3	49	120.2	83	180	356
9.9	50	122.0	88	190	374
10.4	51	123.8	93	200	392
11.1	52	125.6	99	210	410
11.5	53	127.4	100	212	413

SPECIAL FITTINGS

Within the scope of this schedule of list prices, a special fitting is defined as a fitting having the same general form as a regular fitting, with minor differences in dimension and pattern. The more commonly specified special fittings within this category fall under one of the following general classifications. List prices to be applied for special fittings within this category are as indicated.

Classification	List price
Street Ells Drainage Ells, Tees, Y's Side Outlet Ells Laterals, True Y's	Std. or XHY Fitting (S.E. or F.E.)
Socket Weld Ells, Tees, 45° Ells	Weld and Sweat Fittings
Reducers, Couplings	Std. or XHY Fitting (S.E.)
Crosses Side Outlet Tees Plug Cocks	Std. or XHY Valve (S.E. or F.E.) +25%
Check Valves	Std. or XHY Valve (S.E. or F.E.)
Henry Valves	Std. S.E. Valve
Screwed and Flanged Ells 1/4" to 1 1/4" 1 1/2" and larger	XHY Ells +50% Std. or XHY Ell (F.E.)
Relief or Safety Valves Regulating Valves Butterfly Valves Packless Valves Clamp or Saddle Gate Valves Cross or Tee Valves Float Valves Expansion Valves By-Pass Valves Solenoid Valves Strainers, Scale Traps All other valves and special fittings	Std. or XHY Valve (S.E. or F.E.) +50%

Note: When ordering special fittings and valves, it is necessary to give name of manufacturer and catalog number.

CORK CENTERS

Where two parallel pipes have been installed so closely together that it does not permit the application of full thickness of cork covering on both pipes, we can furnish molded cork centers for the space between the pipes and half sections of pipe covering for the outer areas.

When ordering such material it is necessary to know the size of each pipe and the exact distance between the pipes. The list price for this material is exactly the same as though straight pipe covering were furnished for each pipe.

LAGGING for BRINE COOLERS and CYLINDRICAL TANKS

BRINE COOLERS: Specification No. 1

The cylindrical body shall be insulated with one layer of Corinco Cork Lagging. Lagging shall be beveled to the proper diameter and shall be coated inside and out with mineral rubber. The lags shall be applied with Corinco Waterproof Cement between all joints and additionally secured with galvanized iron bands approximately 1" wide, drawn up tight with clips and bolts. These bands shall be spaced approximately 12" apart.

The flanged ends of the cooler shall be insulated with Corinco Cork Discs supported by a cork lagging collar applied over the flanges. This lagging shall extend to the outer surface of the disc and have a bearing on the body lagging at least 12". The collar lags and discs shall be applied in a similar manner as specified for body lags and be removable. All spaces between tank and lagging shall be filled with Corinco Brine Putty and spaces between discs and tank ends must be filled with regranulated cork.

Finish

After all insulation is applied, all chipped edges shall be filled and smoothed with Corinco Seam Filler and the entire surface then given one coat of Corinco Cork Covering Paint.

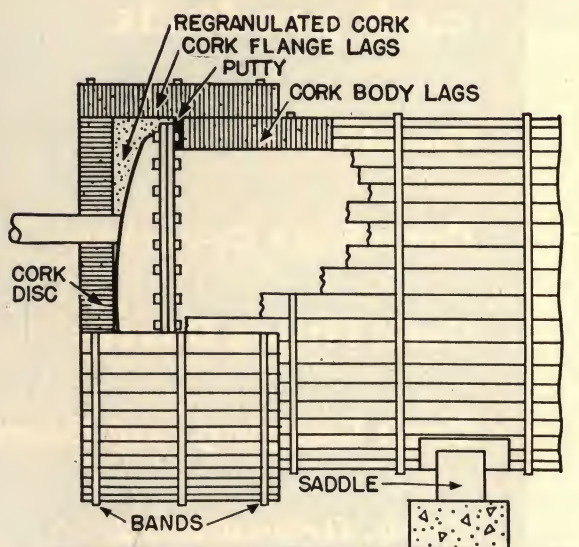
CYLINDRICAL TANKS—WELDED ENDS: Specification No. 2

The cylindrical body shall be insulated with one layer of Corinco Cork Lagging, beveled to the proper diameter and coated inside and out with mineral rubber. The lagging shall be secured to the tank with copper-clad steel wires spaced not more than 9" apart. The ends shall be insulated with Corinco Cork Discs supported in place by the body lagging, which shall extend beyond the tank to the outer surface of cork disc.

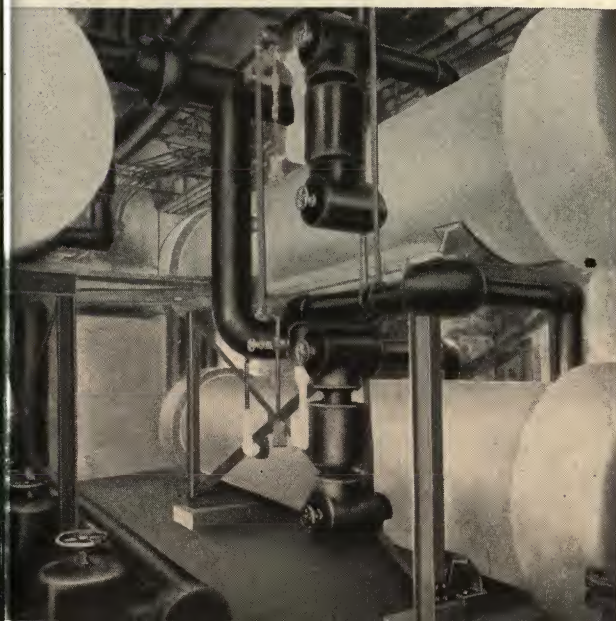
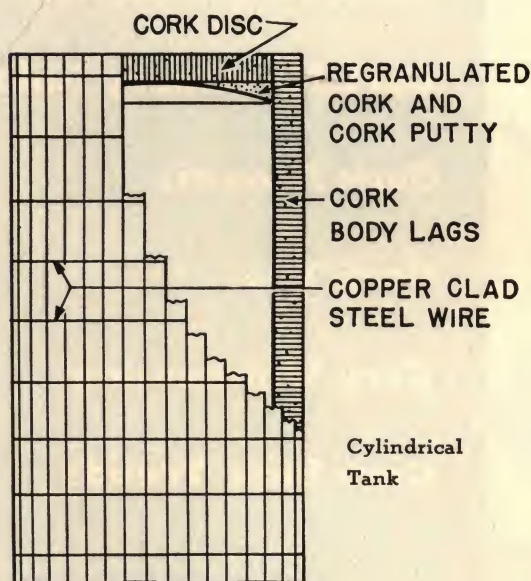
Finish

Seams shall be filled and all chipped and raw edges smoothed with Corinco Seam Filler and then the entire surface given one coat of Corinco Cork Covering Paint.

Left: Brine lines insulated with Corinco cork pipe covering and tanks insulated with Corinco cork lagging.



Flanged Head Cooler



Branch offices

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Corinco Insulation Co., Inc.
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LOS ANGELES 11 (Vernon), CALIFORNIA

Cork Insulation Co., Inc.
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